Quality Control

Work Order Friday, May 16, 20			*110	P636*						Page	1
Revision ID:	3622-1 all Stud		Accept	*N900	040	100) * ፡	Setup Sta	17	S1* S2*	
Start Date: 5/ Required Date: 5/ Reference:	Start Qty: 20.00 (30/14 Req'd Qty: 20.00	/ \ /		Cust Item 1 Customer:	ID:					5 /"	
Approvals: F	Process Plan: MLD	Date: 14-05-73	Tooling:	· D	ate:		F	Run Sta	~! <i>\</i> J	R1*	
(QC:	Date:	SPC (Y/N):	D	ate:	- Tables		Sto	_b *//	R2*	
Sequence ID/ Work Center ID	Operation Description		Set Up/ Run Hours	Tool ID	Tool#	Plan Code	Accept Qty	Reject Qty	Reject Number		
Draw Nbr	Revision Nbr			-							
D3622	Rev C										
*100 *100*	Hardinge CNC LATHE	E SMALL	0.00				20	D		DAS 20 9-89	
Hardinge	Memo		0.00					<i>X</i> 0	-	- 9- 0ŧ	19-06-11
Hardinge CNC Lathe S	FOLIO RE DWG REV	AS PER FOLIO FA686 & DW EV:_ <i>M/A</i> _ V: C _ R AS REQUIRED	G D3622 ,								
110	QC2- Inspect parts off	machine FAI/FAIB	0.00							DAS	
110 QC	Memo		0.00				20	Ø		20 9-89	14-06-11
Quality Control											
¹²⁰ *1 2 ∩*	QC8- Inspect parts - sec	cond check	0.00 PB 14/6/11	;			(20)			DAS 40 9-89	
QC Quality Control	Мето		0.00				count				-

DQA:		Date:										`	$\mathbb{T}\mathbb{Q}\mathbb{A}\mathbb{G}^{2}$
					WORK ORDER NON	-CC	ONFO	RMANCE / UPD				_	AEROSPACE
QA Closed:		Date:							W	ork Order up	date only		
Work Order:					DISPOSITION				AGAINST DI	PARTMENT	/PROCESS		
Work Order:					Rework	1		Skid-tube	Crosstube]	Water Jet		Engineering
Part No.					Scrap	1		Machining	Small Fab	Pro	d. Eng. Coor.	_	Quality
					Use-as-is	1		noforming	Finishing	┥	re/Packaging		Other
NCR No.					Suspected Unapproved	1		· -	Composite]	Supplier		
Root				Desc	ription of work order update	1	nitial	Action	n	Sign &			
Cause	Date	Step	Qty		or non-conformance	Ch	ief Eng	Descript	tion	Date	Verification	י	QC Inspector
Design													
Doc/Data													
Equip/Tooling													
Handling/Pre						l							
Material													
Operator (-												
Offset/Setup 3												-	
Process	1												
Supplier	-										1		
Training	}												
Transport	1												
Unapproved		<u> </u>	<u> </u>	L	·	FA	ULT CA	TEGORY	··· ·	<u> </u>			
Landing	Gear	-			General	• • • •					·-	-	
,	Bending				Bend		Folio/F	Program	Γ	Outside Dim	ensions	Pi	ressure/Forced
	Centre No	ot Concer	ntric		BOM/Route		Grain		ļ	Over/Under	tolerance	S	et-up
	Cracks				Broken/Damage/Defect	Г	Hardwa	are		Part Incorred	ci [Te	emperature/Cure
	Crimp/Kir	nk/Ripple	/Wave	<u> </u>	Burrs		Inspect	ion Incomplete/Unqu	ualified	Part Lost/Mi	ssing	v	/eld
استة ع	Cuffs				Contamination		Instruct	tions Incomplete/Unc	clear	Part Moved			rong Stock Pulled
24-	Crushing				Countersink]Misali	gned/off center	_	Positioned V	Vrong		
	Heat Trea	at			Cut Too Short		Mislab	eled		Power Loss/	Surge	0	ther
	Inspectio	n Strip in	Tube		Drawing		Misrea	d					
	Marks/Cl	natter			Drill Holes		Off-set				.		
	Turning S	equence			Finish		4	Calibration					
	Wave/Tw	ist in Tub	oe .		Fit/Function		Out of	Sequence					

Work Order ID 119636 *119636* Friday, May 16, 2014 1:52:37 PM Item ID: D3622-1 Accept *N900040100* Setup Start **Revision ID:** Stop Item Name: Ball Stud Start Date: 5/30/14 **Start Oty: 20.00** *20* **Cust Item ID:** Required Date: 5/30/14 Req'd Qty: 20.00 *20* **Customer:** Reference: Start Run **Approvals:** Process Plan: Date: Tooling: Date: Stop QC: Date:_____ SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Accept Reject Reject **Work Center ID** Description **Run Hours** Code Qty Qty Number 130 Identify as per dwg & Stock Location:____

140

QC21- Final Inspection - Work Order Release

50082

0.00

0.00

0.00

140

130

Packaging

Packaging

QC

Memo

Memo

Quality Control

0.00

Page 2

Insp.

Stamp

DQA:			Date:											TRAGG"
			0-4			WORK ORDER NON-	-CC	ONFO	RMANCE / UP		Nort Order	update only		AEROSPACE
QA Closed:			Date:					_		· · · · · · · · · · · · · · · · · · ·	vork Order	update only	Ш	
Work Orde	er:				,	DISPOSITION				AGAINST D	EPARTMEN	T/PROCESS		
	··· —					Rework	1		Skid-tube	Crosstube	\neg	Water Jet		Engineering
Part N	lo.					Scrap			Machining	Small Fab	T PI	od. Eng. Coor.	Ħ	Quality
	_					Use-as-is			noforming	Finishing	_	ore/Packaging	_	Other
NCR N	lo.					Suspected Unapproved			Large Fab	Composite	7	Supplier	_	
Root					Desci	ription of work order update	1	nitial	Actio	on	Sign &			
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Descrip	otion	Date	Verification	n	QC Inspector
Design														
Doc/Data													- 1	
Equip/Tooling	_												ł	
Handling/Pre	_													
Material	_													
Operator														
Offset/Setup														
Process	_													
Supplier	4													
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Transport	_													
Unapproved						·· <u></u>		···		<u></u>	l_			
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Landir	_				_	General I		l_		Г				D/5d
		ending			_	Bend	L		Program	-	Outside Di		$\overline{}$	Pressure/Forced
	_		ot Concer	ntric	\vdash	BOM/Route	\vdash	Grain		-		er tolerance	-	Set-up
	_	racks			-	Broken/Damage/Defect	_	Hardwa			Part Incor		-	Temperature/Cure Weld
}	_	-	ık/Ripple	/Wave	-	Burrs	<u> </u>		ion Incomplete/Unq	· -	Part Lost/I	_	-	
		uffs			\vdash	Countarink	\vdash	4	tions Incomplete/Ur	iciear	Part Move		لـــا	Wrong Stock Pulled
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	_	nspectioi Narks/Ch	n Strip in	iube	-	Drawing Drill Holes	-	Off-set				<u> </u>		
	\vdash		equence		-	Finish	\vdash	4	Calibration		•			
	_		ist in Tuk		\vdash	Fit/Function	 	4	Sequence					
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Friday, May 16, 2014 1:52:41 PM

Work Order ID: 119636

119636

Parent Item:

D3622-1

D3622-1

Parent Item Name: Ball Stud

Start Date: 5/30/14

Required Date: 5/30/14

Start Qty: 20.00

Required Qty: 20.00

Comments:

IPP Rev:A New Issue 07-04-24 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch		Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status	
M303H0.500		Purchased	No			100	f	29.9160	0.108	3			DAS	
M303H0	500								**	3.350			20 9-89	14-0

303 HEX BAR .500

Location	Loc Oty	Loc Code	
MAT018	29.916		
m127464	2.73		
m128496	6.925		3,350'
m128882	20.261		

DQA:			Date:										
						WORK ORDER NON	I-CO	ONFO	RMANCE / UP	DATE		_	AEROSPACE
QA Closed:			, Date:							W	ork Order up	odate only	
W. 1 O. 1						DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Work Order	· —					Rework	7		Skid-tube	Crosstube	1	Water Jet	Engineering
Part No	`					Scrap	1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
, are no	·· —	··-				Use-as-is	1		noforming	Finishing	4	re/Packaging	Other
NCR No	o					Suspected Unapproved]		Large Fab	Composite		Supplier	
Root	Т	1	Ì		Desc	ription of work order update	Ti	nitial	Actio	on	Sign &		
Cause S		Date	Step	Qty	2000	or non-conformance	1	ief Eng			Date	Verification	QC Inspector
Design	1												,
Doc/Data	7												
Equip/Tooling													
Handling/Pre													
Material													
Operator													
Offset/Setup													
Process							1						
Supplier													
Training													
Transport					,								
Unapproved									J		<u> </u>		
							FA	ULT CA	TEGORY		.		· · · · · · · · · · · · · · · · · · ·
Landing	g Gea	r			_	General		a .			٦		¬_ ,_ ,
	Bei	nding			Ĺ	Bend		1	Program	ļ	Outside Dim	-	Pressure/Forced
	Ce	ntre No	t Concer	ntric		BOM/Route		Grain		<u> </u>	Over/Under	ŀ	Set-up
	Cra	acks			<u> </u>	Broken/Damage/Defect		Hardwa		_	Part Incorre	F	Temperature/Cure
\	Cri	mp/Kin	ık/Ripple	/Wave		Burrs		- 1 '	tion Incomplete/Und		Part Lost/M	issing	Weld
	Cu	ffs			_	Contamination		-	tions Incomplete/Ur	nclear	Part Moved	L	Wrong Stock Pulled
	Cru	ushing				Countersink		-	gned/off center		Positioned V	· · · · · · · · · · · · · · · · · · ·	-
	∐Hе	at Trea	t			Cut Too Short		Mislabe			Power Loss/	Surge [Other
	Ins	pection	n Strip in	Tube		Drawing	<u>_</u>	Misrea					
	Ma	arks/Ch	atter			Drill Holes	<u></u>	Off-set					
	_	_	equence			Finish	_	4	Calibration			<u></u>	
1	W	ave/Tw	ist in Tuk	oe .		Fit/Function		Out of	Sequence				

DART AEROSPACE LTD	Work Order:	119636
Description: Ball Stud	Part Number:	D3622-1
Inspection Dwg: D3622 Rev: C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

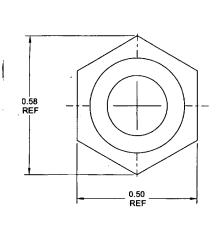
X	First Article	Prototype
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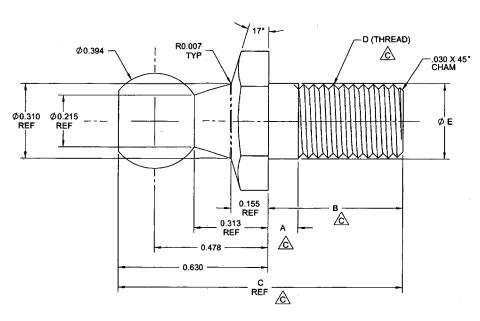
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.58	+/-0.030	.563	/		5108	Vein
0.50	+/-0.030	.498	1		1	
Ø0.394	+/-0.010	.395	V			
Ø0.310	+/-0.010	, 309	✓			
Ø0.215	+/-0.010	. 218	V			
0.155	+/-0.010	.151	/			
0.313	+/-0.010	. 310				
0.478	+/-0.010	.477	/			
0.630	+/-0.010	.630	V			
0.125	+/-0.010	.130	V			
0.563	+/-0.010	.560	V			
1.19	+/-0.030	1.186	V		1/	
0.3125-24UNF-3A	+0.000/-0.072	.312-24-3A			V	
M.O.W.	Min = 0.3336 Max = 0.3363	.335	/		5102	Mic

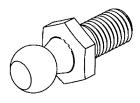
	DAS			DAS		

	20		40_		
Measured by:	9-89	Audited by:	2B 9-89	Preliminary Approval:	
Date:	14-06-11	Date:	14/6/11	Date:	

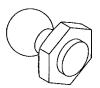
Rev	Date	Change	Revised by	Approved
Α	08.04.15	New Issue	KJ/DD	
В	10.02.02	Dwg Rev updated	KJ 10	
С	11.02.18	Dimensions updated per Dwg Rev C	KJ 9K/	\mathcal{M}







D3622-1 BALL STUD SHOWN



PART	DIM	DIM	DIM	WEIGHT	THREAD	Ø	E
NUMBER	Α	В	Ç	(LBS)	D	MIN	MAX
D3622-1	0.125	0.563	1.19	0.03	0.3125-24UNF-3A	0.3053	0.3125
D3622-3	0.125	0.563	1.19	0.03	0.1875-32UNF-3A	0.1840	0.1900
D3622-5	0.090	0.900	1.53	0.04	0.3125-24UNF-3A	0.3053	0.3125
D3622-7	0.060	0.330	0.96	0.03	0.3125-24UNF-3A	0.3053	0.3125
D3622-9	0.090	1.160	1.79	0.04	0.3125-24UNF-3A	0.3053	0.3125
D3622-11	0.060	N/A	0.69	0.02	NOT THREADED	0.270	0.300
D3622-13	0.090	0.680	1.31	0.03	0.3125-24UNF-3A	0.3053	0.3125

D3622-X BALL STUD

SHOP COPY RETURN TO ENGINEERING

UNCONTROLLED COPY SUBJECT TO AMENDMENT

WITHOUT NOTICE

WURK URDER 15 119636 1405-23

С

В

A

D3622-11 BALL STUD SHOWN

SHEET 1: ADD -5, -7, -9, -11 & -13. ADD D3622-X TABLE. SHEET 2 DELETED 10.07.20 ADD -3 (SHEET 2) HS 09.09.18 NEW ISSUE MB 07.04.13 REV. DESCRIPTION DATE

DESIGN DART AEROSPACE LTD DRAWN JPH HAWKESBURY, ONTARIO, CANADA CHECKED DRAWING NO. REV. C D3622 MFG. APPR. SHEET 1 OF 1 APPROVED TITLE SCALE **BALL STUD** DE APPR. NTS DATE 10.07.20

COPYRIGHT © 2009 BY DART AEROSPACE LTD

1) MATERIAL: AISI 303 HEX BAR REF DART SPEC M303H0.500

2) FINISH: N/A

2) FINISH: NNS:
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENT P/N D3622-X & B/N PER QSI 044
27) WEIGHT: SEE D3622-X TABLE

5

3

С